

ABSTRACT OF THE DISCLOSURE

Featured are devices and systems embodying one or more electrically-addressable-solid-state nanopores useful for sensing and/or characterizing single macromolecules as well as sequencing DNA or RNA. In one aspect of the present invention, there is featured a linear or 2-D electrically-addressable array of nanopores, where the nanopores are located at points of intersections between V-shaped grooves formed in an upper surface of the insulating member and a V-shaped groove formed in a lower surface of the insulating member. In another aspect of the present invention the solid-state nanopore of the present invention the width and/ or length of the nanopore is defined or established by sharp edges of cleaved crystals that are maintained in fixed relation during the formation of the insulating member including the nanopore.